UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

February 17, 2000

MEMORANDUM

SUBJECT: Five-Year Review for *Operating Industries Incorporated (OII)* Superfund Site, Monterey Park, California

FROM: F. Russell Mecheln IV
Remedial Project Manager

THRU: Loren E. Henning, Chief
Hi/Nv/Ca Cleanup Section

John Kemmerer, Chief
Site Cleanup Branch

TO: Keith A. Takata, Director
Superfund Division

We are forwarding for your signature the Five-Year Review which has been completed for the *Operating Industries Incorporated (OII)* landfill Superfund site, located in Monterey Park, California. The review has been undertaken by our technical consultants and has been reviewed to ensure conformance with applicable EPA guidance documents and standards.

During the last five years, EPA has maintained a strong oversight program to ensure that remedies conducted by the potentially responsible parties (PRPs) are being accomplished in compliance with ARARs, remediation objectives, and performance standards outlined in EPA's decision documents for the site. EPA has maintained a full time oversight presence on the site and has been implementing a strong and proactive community involvement program with both the cities of Monterey Park and Montebello.

We provide the following protectiveness statement for your signature:

Protectiveness Statement:

The remedies at the Operating Industries Incorporated (OII) landfill Superfund site are expected to be protective of human health and the environment and immediate threats have been

addressed. The remedies implemented and continuing for (1) the Site Control and Monitoring (SCM) and (2) the Leachate Management System (LMS) Operable Units meet or exceed the levels of protectiveness of human health and the environment established in the Records of Decision for these Operable Units. Moreover, these activities undertaken to stabilize the landfill on an interim basis prior to implementation of the final remedies for the OII site have been timely, efficient, and reliable. Construction of remedial systems required for implementation of the ROD and amendment for the Gas Control and Landfill Cover Operable Unit for the South Parcel are nearing completion. Similar landfill gas control and cover remedial actions and longterm operations and maintenance will be implemented for the OII North Parcel pursuant to EPA negotiations and /enforcement activities that are continuing in 2000. Concurrent with ongoing remedial and enforcement actions, integration of effective site control and monitoring and leachate management for the OII site is being continued to sustain a high level of protectiveness of human health and the environment. Finally, with the issuance of the Final Remedy Special Notice Letter, EPA has initiated and is pursuing enforcement activities to ensure implementation of final remedial measures for the OII site which will assure protectiveness of human health and the environment for the long term.

Approved by : _____ Date: 9/18/00

FOR Keith A. Takata, Director
Superfund Division

Attachment: OII Five-Year Review

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX
SUPERFUND DIVISION
FIVE-YEAR REVIEW (TYPE IA)
OPERATING INDUSTRIES, INC. LANDFILL
MONTEREY PARK, CALIFORNIA

CDM FEDERAL PROGRAMS CORPORATION

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX
SUPERFUND DIVISION
FIVE-YEAR REVIEW (TYPE IA)
OPERATING INDUSTRIES, INC. LANDFILL
MONTEREY PARK, CALIFORNIA

Prepared for:

U.S. Environmental Protection Agency

through

U. S. Army Corps of Engineers

Prepared by:

CDM Federal Programs Corporation

February 17, 2000

U.S. Environmental Protection Agency
Region IX
Superfund Division
Five-Year Review (Type IA)
Operating Industries, Inc. Landfill
Monterey Park, California

1.0 Introduction

Authority Statement. Purpose. The Operating Industries, Inc. Landfill (the OII Site), a hazardous waste landfill located in Monterey Park, California, was placed on the National Priorities List in May 1986. The U.S. Environmental Protection Agency (EPA) has been conducting response actions at the OII Site since that time to provide protection of human health and the environment. EPA Region IX conducted this review pursuant to CERCLA Section 121(c), 42 U.S.C. § 9621(c), NCP Section 300-400 (f) (4) (ii), and OSWER Directives 9355.7-02 (March 23, 1991), 9355.7-02A (July 26, 1994), and 9355.7-03A (December 21, 1995). It is a statutory review, required 5 years after initiation of implementation of the first operable unit at OII.

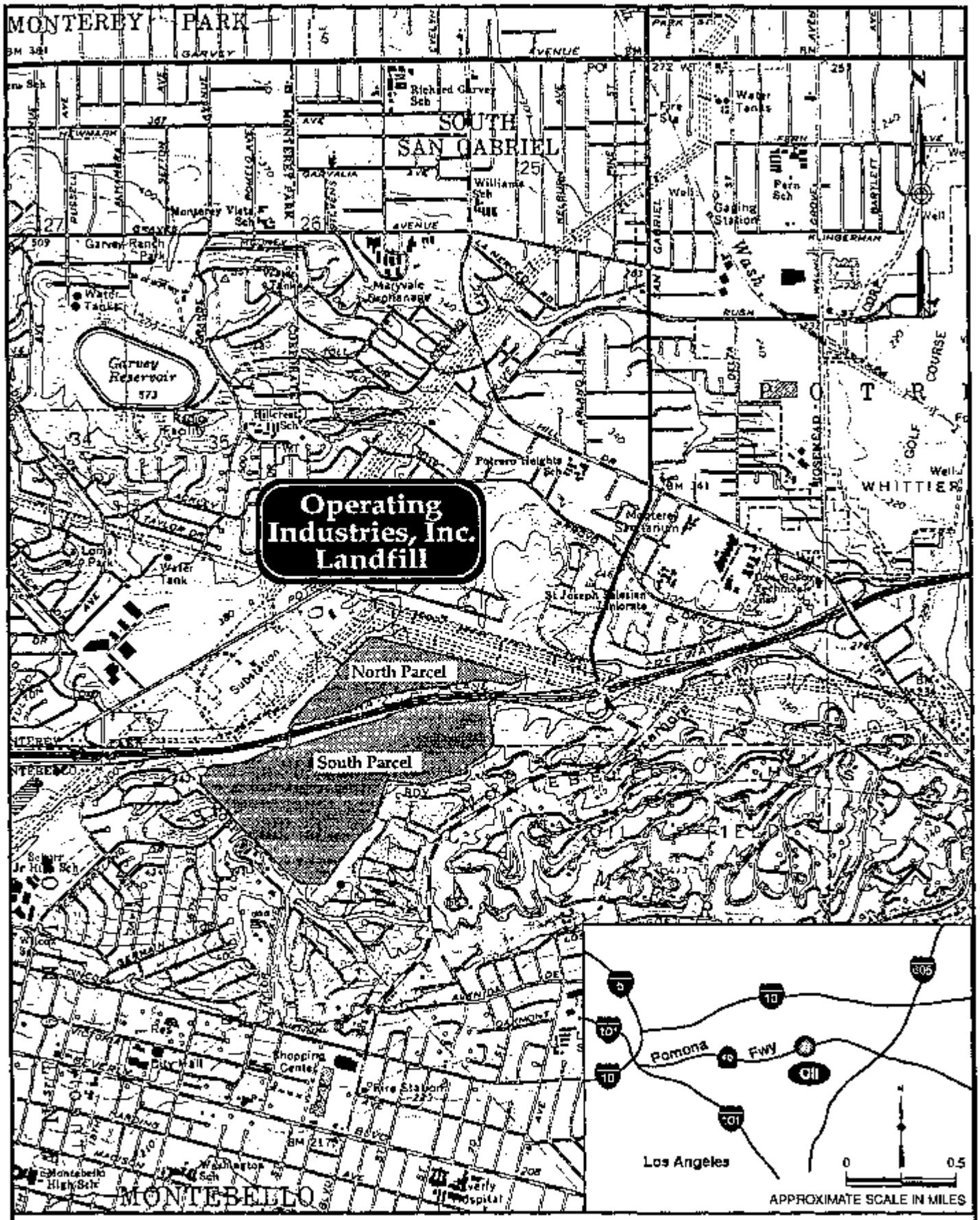
The purpose of this five-year review is to document that the remedial actions specified for the OII Site remain protective of public health and the environment and are functioning as designed. This document will become a part of the OII Site File. This is a "Type IA" review, as defined in OSWER Directives 9355.7-02A and 9355.7-03. The Type IA review is applicable to the OII Site as remedial actions are currently ongoing with full-time on-site oversight presence being provided by EPA's contractor site engineer and U.S. Army Corps of Engineers representatives. EPA's oversight of remedial actions includes frequent site visits for on-site inspection and assurance of compliance with all site decision documents. The first five-year review was completed in May 1995. The Five-Year Review report consists of five sections, including this Introduction. Section 2.0, Remedial Objectives, contains a discussion of the remedial objectives

identified in the four Records of Decision (ROD). The work being performed to fulfill these objectives, and the current status of these activities, will be included in Section 2.0. The third section, Recommendations, will present EPA's plans for additional work to be performed at the Site in addition to the work required by the four RODs. A statement of the protectiveness of the remedies identified at the site will be presented in Section 4.0. The report concludes with a schedule for the next five-year review, presented in Section 5.0.

1.1 Background

Site Characteristics. The OII Site is located at 900 Potrero Grande Drive in the City of Monterey Park (Figure 1-1) and is situated in the central La Merced (also known as Montebello) Hills of the Los Angeles Basin. The San Gabriel Valley lies to the north of the hills and the Los Angeles Coastal Plain to the south. The landfill property covers 190 acres and is divided by California Highway 60 (Pomona Freeway). The 45 acres to the north of the freeway are referred to as the North Parcel and the 145 acres of the site south of the freeway are called the South Parcel. The neighboring city of Montebello borders the South Parcel.

The Monterey Park Disposal Company began landfilling operations in 1948 in an area of the Site that was originally a sand and gravel quarry. Operating Industries, Inc., the current owner, purchased the landfill in 1952 and continued disposal operations. Throughout its operating life, residential and commercial refuse, industrial wastes, liquid wastes, and various hazardous wastes were disposed at the landfill. The landfill operators stopped accepting hazardous liquid wastes in January 1983 and other liquid wastes in April 1983. Landfilling operations ceased in October 1984. In January 1984, before disposal operations ended, the State of California placed the OII Site on the California Hazardous Waste Priority List. That same year, EPA proposed the OII Site for the federal National Priorities List of Superfund sites. In May 1986, the OII Site was placed on the National Priorities List, and EPA assumed responsibility for activities at the landfill. EPA began the remedial investigation/feasibility study at the OII Site in 1986.



Source: USGS 7.5 minute
El Monte Quadrangle 1966
Photorevised 1981

Figure 1-1
Landfill Location Map
OII Landfill

nvsoe69222.07.01/Fig1-1 3/94

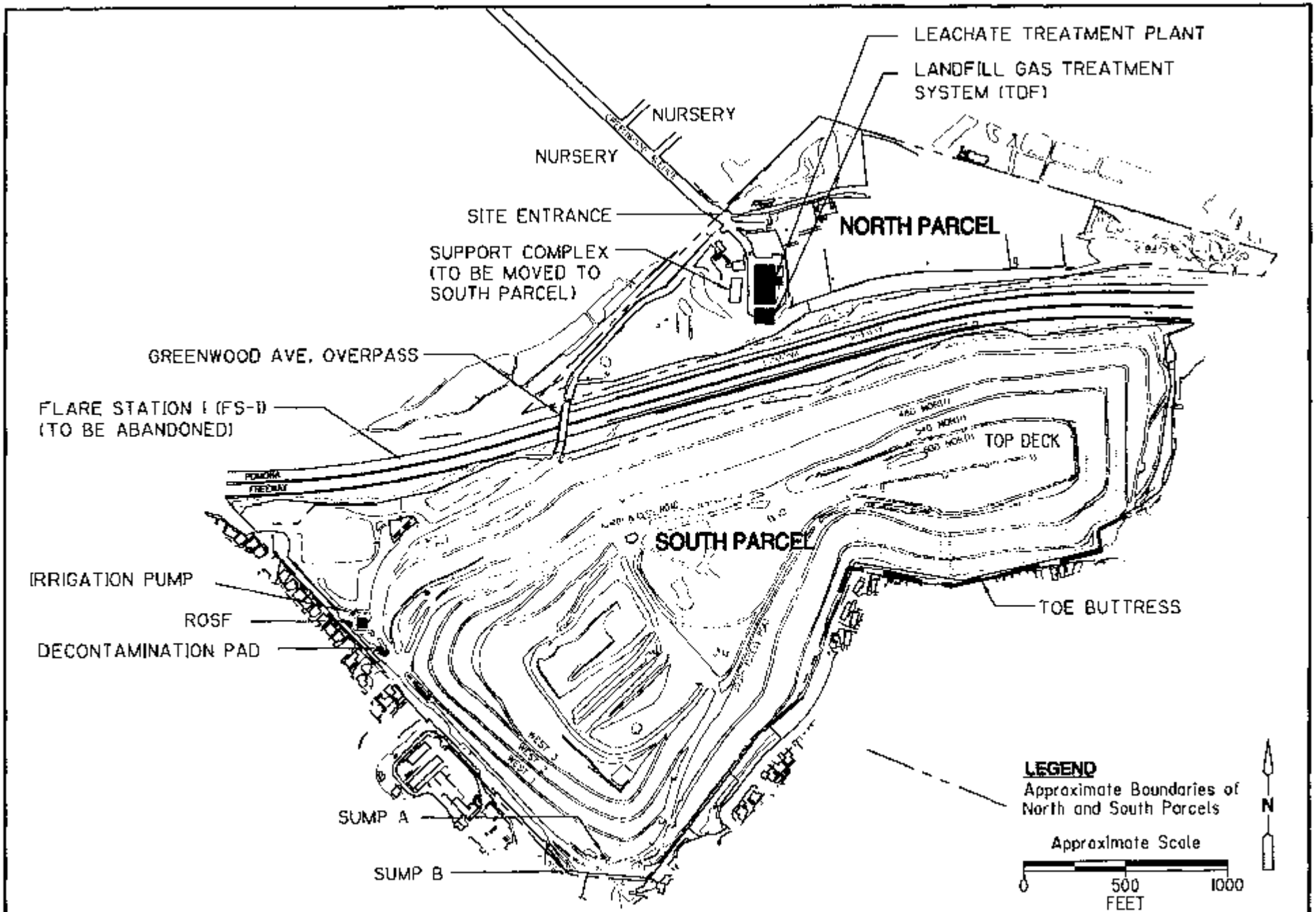
Operable Units. To efficiently manage the problems at the OII Site and to address the most apparent environmental problems prior to implementation of the final remedy, EPA identified three operable units for remedial action in advance of selection of the final remedy. The term "operable unit" refers to a discrete action taken at a Superfund site to address specific site problems. At the OII Site, the three operable units identified to date pertain to site control and monitoring activities; leachate management; and landfill gas control and landfill cover. Individual feasibility studies and Records of Decision have been completed and signed by EPA for each of these three operable units. In addition, on September 30, 1996, EPA signed the Final ROD for the OII Site. The Final ROD addresses liquids control and contaminated groundwater as well as long-term operation and maintenance of all environmental control facilities at the OII Site.

2.0 Remedial Objectives

The remedial objectives established for the OII Site operable unit RODs and the Final ROD are summarized below. This section will discuss the general and task-specific objectives and the current status of activities for the three operable units and the Final ROD.

2.1 Operable Unit No. 1: Site Control and Monitoring (SCM)

In the ROD for the Site Control and Monitoring Operable Unit (EPA, 1987a), EPA determined that full-time site control and monitoring should be undertaken, providing daily operation, repairs and replacements of control system components when necessary, and system improvements, until selection of the final remedy. There are seven major environmental control systems and activities at the OII Site that require operation, maintenance, inspection, and monitoring on a continuous basis: gas extraction and air dike systems (abandoned in 1997), leachate collection system, irrigation system, access road system, stormwater drainage system, site security, and slope repair and erosion control. The general configuration of the OII Site, as it exists, is depicted in Figure 1-2. Major landfill structures, including roadways, environmental control



MAJOR LANDFILL STRUCTURES

OPERATING INDUSTRIES, INC. LANDFILL

CDM Federal Programs Corporation

Figure 1-2

systems, and monitoring facilities, are also shown on this figure. The ROD for site control and monitoring was interim in nature and ended at the signing of the Final ROD, although most activities required under the Site Control and Monitoring ROD are integrated into and continue as a part of the Final ROD.

The ROD for the Site Control and Monitoring Operable Unit (EPA, 1987a) established the following three objectives which guided the development of the selected remedial alternatives and remedial actions:

1. Site control and monitoring remedial alternatives must be easily and rapidly implementable. The interim alternatives must be consistent with the final remedy.

2. Remedial actions which permanently reduce the volume, toxicity, or mobility of the contaminants at the OII Site are preferred.

3. Remedial actions must be cost-effective for the interim period.

Site control and monitoring activities were undertaken to stabilize the landfill during the period prior to the implementation of the final remedies. During this interim period, the objectives of activities associated with the gas control system were to minimize the uncontrolled release of landfill gas through gas emissions from the landfill surface and offsite gas migration through subsurface soil. The gas control system was also operated to prevent or minimize the occurrence of underground fires. A final objective was maximizing flare station landfill gas destruction efficiency on an interim basis until replacement by a more reliable and more protective landfill gas treatment system is accomplished under the Gas Migration Control and Landfill Cover ROD.

These objectives have been achieved, for purposes of the Site Control and Monitoring interim Operable Unit, through the efficient operation and monitoring of the gas control system since EPA assumed responsibility for the OII Site. Significant improvements were made to the gas

control system components and flare station operational efficiency and reliability was increased through the upgrade of station equipment including blowers, flares, and controls. Replacement of extensive sections of gas collection system piping and repairs of collection wells have provided increased control over the release of landfill gas. Currently, in conjunction with activities being performed under the Gas Migration Control and Landfill Cover ROD, the interim improvements are being replaced with permanent liquid and gas extraction and conveyance facilities. In addition, transition to and operation of a new landfill gas thermal destruction facility (TDF, also referred to as the Landfill Gas Treatment System), and abandonment of the existing flare stations is being undertaken.

The primary objectives of the leachate control, maintenance, and monitoring activities under the Site Control and Monitoring Operable Unit were to transfer collected leachate and liquids to aboveground storage tanks, pretreatment facilities, or conveyance systems; mitigate potential offsite surface seeps immediately upon discovery; and mitigate potential off-site subsurface seepage, if possible. These objectives were satisfied through the effective monitoring and operation of the leachate management system. During the interim period before implementation of the final remedies, extensive upgrades to the leachate and condensate conveyance systems, including piping, tank, and pumping control components, have resulted in the improved efficiency of liquids transfer and storage operations at the site. Seep mitigation measures were implemented, consisting of the installation of collection trenches and conveyance equipment, which have both mitigated surface seeps and reduced potential for subsurface seepage.

The other five environmental control systems under this interim Operable Unit (irrigation system, access road system, stormwater drainage system, site security, and the cover system), continue to be effectively operated and maintained under current enforcement agreements with potentially responsible parties, resulting in an increased stabilization of the landfill. Some examples of the activities undertaken in the past include the construction of a new drainage system on the top deck of the landfill, a revamping of the entire irrigation system, including the addition of a new

water supply pump, and conducting of ongoing maintenance of the cover system through the placement of clean fill material.

In summary, the remedial objectives established in the interim Site Control and Monitoring ROD/Operable Unit have been and are continuing to be effectively achieved. Activities consistent with the final remedies for the OII Site were implemented and are being operated to achieve an overall stabilization of the landfill through the control of gas emissions, leachate seepage, and stormwater runoff. In 1996, the interim Site Control and Monitoring ROD was superseded by the Gas Migration Control and Landfill Cover and Final RODs. In conjunction with these RODs, Site Control and Monitoring Operable Unit objectives and activities will be continued to assure maximum long-term protectiveness of human health and the environment.

2.2 Operable Unit No. 2: Leachate Management and Leachate Treatment Plant

EPA's selected remedy for management of OII Site-associated leachate (until implementation of the Final ROD), as presented in the ROD for the leachate management Operable Unit (EPA, 1987b), is treatment of the leachate at a treatment plant located at the landfill. This plant was constructed on the North Parcel and consists of influent storage and equalization, biological reactors, chemical precipitation, sand filtration, granular activated carbon adsorption, effluent storage and discharge, foul air system, stormwater holding system, and sludge disposal system. The ROD specified that treated leachate be disposed of in facilities operated by the County Sanitation Districts of Los Angeles County. The ROD for leachate management was interim in nature and ended at the signing of the Final ROD, although most activities required under the Leachate Management Operable Unit will continue as part of the Final ROD.

The ROD for the Leachate Management Operable Unit (EPA, 1987b) established the following three objectives which guided the development of the selected remedial alternative:

1. The remedial action must be easily and rapidly implementable and have the potential to be integrated into the final remedy for the site.

2. The alternatives must be flexible in order to manage both short- and long-term variations in the leachate collection rate and in the chemical characteristics of the leachate.

3. Remedial actions which included treatment to permanently and significantly reduce the volume, toxicity, or mobility of OII leachate contaminants were preferred.

EPA's selected remedy, which addressed the above remedial objectives for this Operable Unit, called for treatment of the leachate at a treatment plant located at the landfill. The leachate treatment plant has been designed and constructed, and currently is in full-time operation. It includes both biological and physical/chemical processes to provide the flexibility to manage the variations in the chemical characteristics of the leachate and to significantly reduce the toxicity of leachate contaminants. The leachate treatment plant is configured to allow expansion, if needed, to treat increased leachate flows and additional liquids from the site that could result from implementation of the final remedy for the OII Site. Liquids from other sites will not be accepted for treatment at the OII plant.

Start-up of the leachate treatment plant was completed in the summer of 1995 and current activities involve the long-term operation and maintenance of the plant. In conjunction with these activities, optimization of plant operations has been accomplished to enhance protectiveness and improve cost-effectiveness. Operation of the plant has proven to achieve the remedial objectives established in the ROD for this Operable Unit. All liquids discharged from the plant meet the standards established by the County Sanitation Districts of Los Angeles County. In 1996, the interim Leachate Management ROD was superseded by the Gas Migration Control and Landfill Cover and Final RODs. In conjunction with implementation of these RODs, Leachate Management Operable Unit objectives will be continued to assure long-term protectiveness of human health and the environment.

2.3 Operable Unit No. 3: Landfill Gas Migration Control and Landfill Cover

The original and amended ROD for this Operable Unit (EPA, 1988a and 1990a) together define a landfill gas migration control remedy to collect and destroy landfill gas that would otherwise be released from the landfill. In general, the work specified in the original and amended ROD includes predesign, design, construction, compliance testing, operation, maintenance, and monitoring of a landfill gas control system; a landfill cover system; and a surface water management system for the OII Site. The new landfill gas system will supplement, partially incorporate, and partially replace former elements of the landfill gas system that were implemented under the Site Control and Monitoring Operable Unit. The amendment to the ROD also includes design and construction of a landfill cover to reduce surface emissions of landfill gas, reduce oxygen intrusion into the refuse, reduce surface water infiltration, minimize slope erosion, and improve aesthetics.

The original ROD (EPA, 1988a) and the amended ROD (1990a) established the following remedial objectives for the selected remedial alternative:

1. Limit methane concentration to less than 5 percent at the site boundary.

2. Control surface emissions of landfill gas such that total organic compound concentration is less than 50 ppm on the average and methane concentration is less than 500 ppm at any point on the surface.

3. Minimize odor nuisance. This is directly associated with the reduction of surface emissions.

4. Attain applicable or relevant and appropriate standards, requirements, criteria, or limitations under federal and state environmental laws, according to the terms of CERCLA Section 121, 42 U.S.C. §9621.

5. Expedite implementation by the sequencing and phasing of remedial activities to rapidly mitigate identified gas problems.

6. Provide consistency with final remedies, considering potential effects of future remedial activities in developing alternatives to mitigate and minimize identified gas problems.

7. Integrate gas operations and optimize migration control by integrating perimeter and interior gas extraction systems.

8. Use resource recovery technologies to the maximum extent practicable, if cost-effective.

Additional remedial objectives specific to the cover component of the Operable Unit include reducing oxygen intrusion into the refuse, reducing surface water infiltration, limiting slope erosion, and improving aesthetics.

The selected alternative is currently under construction for the South Parcel of the OII Site. The remedial objectives identified above are being applied to the landfill gas, landfill cover, and surface water management systems being constructed. The ROD as amended specifies performance-based requirements which must be met. Construction and start-up of the gas control system in one geographic area of the site (southwestern perimeter of the South Parcel) was completed in July 1997. Construction and start-up of the remaining gas control components, landfill cover, and surface water management systems for the South Parcel were completed sequentially throughout the OII Site in 1998 and 1999, with completion of all systems expected by the middle of 2000.

The Gas Migration Control ROD as amended requires construction of a thermal destruction facility (TDF, also referred to as the Landfill Gas Treatment System) to treat and destroy landfill gas produced at the OII Site. This facility will replace the existing landfill gas flare system. In October 1996, EPA made the decision to site the TDF on the North Parcel, immediately south of

the leachate treatment plant (Figure 1-2). This decision is to meet EPA's objective to provide maximum protection of human health and the environment while minimizing adverse impacts to other involved parties. Though once considered for incorporation into the TDF, an energy recovery system has been deleted from the design due to technical considerations and cost-effectiveness limitations. Initial start-up and preliminary operation of the TDF began in late 1999 and early 2000. Following operational testing of the TDF, the existing flare stations will be demolished. Full compliance testing of the TDF is anticipated in late spring 2000.

In 1998, EPA initiated formal negotiations with potentially responsible parties and other involved parties to implement Gas Migration Control and Landfill Cover ROD requirements for the North Parcel. It is anticipated that a Brownfields-type strategy that incorporates redevelopment and commercial facilities will be implemented for the North Parcel in conjunction with installation and operations of remedial landfill cover and gas control systems required by the EPA decision documents. Negotiations for completing the settlement are expected to be completed in 2000.

The extent to which the remedial actions fulfill the objectives established in the amended ROD will be evaluated for the North and South Parcels following construction and start-up of the landfill gas control system, landfill cover, and landfill gas treatment facility. The Gas Migration Control and Landfill Cover ROD, together with the Final ROD, supersede the interim RODs for the Site Control and Monitoring and Leachate Management Operable Units.

2.5 Final Record of Decision for the OII Site

In May 1996, EPA issued the Proposed Plan for final remedy of the OII Site. The Proposed Plan was based on EPA's feasibility study and baseline risk assessment completed in 1996. The Proposed Plan was discussed in a Public Meeting and input from the community and involved parties was received.

On September 30, 1996, EPA signed the Final ROD for the OII Site. The Final ROD addresses contaminated groundwater, soils, leachate, and landfill gas, and will include long-term operation and maintenance of all environmental control facilities at the landfill. The final remedy will incorporate work performed under the three operable units. The ROD for the final site remedy (EPA, 1996) established the following remedial action objectives and components:

1. Implementation of a perimeter liquids control system to prevent migration of contaminants from the landfill to groundwater at levels that impair water quality and/or represent a potential threat to human health and the environment. Contaminated groundwater beyond the landfill perimeter would be reduced to below cleanup standards through natural attenuation.

2. Onsite treatment of collected liquids using the existing leachate treatment plant, modified as necessary to handle all existing and new site-associated liquids. Treated liquids will be discharged to the County Sanitation Districts of Los Angeles County sanitary sewer system.

3. Implementation of an environmental/groundwater monitoring and evaluation program to ensure that natural attenuation of the contaminated groundwater is progressing as anticipated, to ensure that perimeter liquids control system performance standards are being met, and to detect future releases of contaminants from the landfill.

4. Establishment of institutional controls to ensure appropriate future use of the OII Site and to restrict groundwater use in the immediate vicinity of the OII Site. The institutional controls will supplement the engineering controls to prevent or limit exposure to hazardous substances.

5. Interim operation and maintenance of existing site activities and facilities, except to the extent that they are addressed under the Gas Migration Control and Landfill Cover ROD.

6. Long-term site administration and operation and maintenance of all facilities and environmental control components at the OII Site.

In September 1997, EPA issued the Final Remedy Special Notice Letter to initiate formal negotiations with potentially responsible parties identified for the OII Site to discuss conducting the final remedial design and remedial actions for the site (Final RD/RA), including implementation of the Final ROD and long-term operation and maintenance of the gas control and landfill cover systems for both the North and South Parcels of the OII Site. Start of work required by the Final ROD is pending completion of a negotiated settlement or other EPA enforcement action as may be required. Negotiations are continuing in 2000. The extent to which the Final RD/RA and long-term operations fulfill the objectives of the Final ROD will be evaluated following facilities construction and start-up.

3.0 Recommendations

No additional response actions at the OII Site have been confirmed at this time as part of this five-year review.

4.0 Statement of Protectiveness

The remedies implemented and continuing for the Site Control and Monitoring and Leachate Management Operable Units meet or exceed the level of protectiveness of human health and the environment established in the Records of Decision for these Operable Units. Moreover, these activities undertaken to stabilize the landfill on an interim basis prior to implementation of the final remedies for the OII Site have been timely, efficient, and reliable. Construction of remedial systems required for implementation of the ROD and amendment for the Gas Migration Control and Landfill Cover Operable Unit for South Parcel are nearing completion. Similar landfill gas control and cover remedial actions and long-term operations and maintenance for the North Parcel will be implemented pursuant to EPA negotiations/enforcement activities that are

continuing in 2000. Concurrently with ongoing remedial and enforcement activities, integration of site control and monitoring and leachate management for the OII Site is being continued effectively to sustain a high level of protectiveness of human health and the environment. Finally, with the issuance of the Final Remedy Special Notice Letter, EPA has initiated and is pursuing enforcement activities to ensure implementation of final remedial measures for the OII Site which will assure protectiveness of human health and the environment for the long-term.

5.0 Next Five-Year Review

The next five-year review will be conducted by March 2005. At that time it is anticipated that the remedial action components of the final remedy will be implemented and the remaining site closure activities will involve the long-term operation and maintenance of all site facilities and environmental control systems.

6.0 References

U. S. Environmental Protection Agency (EPA), 1987a. *Record of Decision, Operating Industries, Inc., Monterey Park, California, Site Control and Monitoring Operable Unit.* July 31, 1987.

EPA, 1987b. *Record of Decision, Operating Industries, Inc., Monterey Park, California, Leachate Management Operable Unit*. November 16, 1987.

EPA, 1988a. *Record o Decision, Operating Industries, Inc., Monterey Park, California, Gas Migration Control Operable Unit*. September 30, 1988.

EPA, 1990a. *Record of Decision, Amendment to Decision Summary, Operating Industries, Inc., Monterey Park, California, Gas Migration Control Operable Unit*. September 28, 1990.

EPA, 1996. *Final Record of Decision for Operating Industries, Inc. Superfund Site, Monterey Park, California*. September 30, 1996.